63D CONGRESS
*2d Session*

HOUSE OF REPRESENTATIVES

DOCUMENT
No. 919

UNITED STATES PUBLIC HEALTH SERVICE

# THE CARE OF THE BABY

**PREPARED BY A COMMITTEE OF THE AMERICAN ASSOCIATION FOR THE STUDY AND PREVENTION OF INFANT MORTALITY AND PRESENTED TO THE ASSOCIATION AT ITS ANNUAL MEETING HELD IN WASHINGTON, D. C., NOVEMBER 14–17, 1913**

SUPPLEMENT NO. 10

TO THE

PUBLIC HEALTH REPORTS

DECEMBER 19, 1913

APRIL 24, 1914.—Ordered to be printed

WASHINGTON
GOVERNMENT PRINTING OFFICE
1914

By Permission Phila. Baby Saving Show
Eleanor Abbott

# THE CARE OF THE BABY.

At the second annual meeting of the American Association for the Study and Prevention of Infant Mortality, held at Chicago in November, 1911, a committee was appointed to prepare an educational leaflet and booklet on the essentials of infant feeding and hygiene. The committee as appointed consisted of:

Dr. H. J. Gerstenberger, Cleveland, chairman.
Dr. John Howland, St. Louis (now of Baltimore).
Dr. Fritz B. Talbot, Boston.
Dr. Henry F. Helmholz, Chicago.
Dr. J. H. Mason Knox, jr., Baltimore.
Dr. P. J. Sedgwick, Minneapolis.

The following members were later added to the committee:

Dr. J. W. Schereschewsky, United States Public Health Service.
Dr. Herman Schwarz, New York.
Dr. T. B. Cooley, Detroit.

The committee presented its report at the meeting of the association held at Cleveland, October 2 to 5, 1912. The booklet and leaflet which they had prepared were read during the meeting and adopted. The leaflet was later published by the association. The publication of the booklet was delayed to allow its further consideration and revision by the committee. Both booklet and leaflet are subject to revision at each annual meeting of the American Association for Study and Prevention of Infant Mortality in order that they may contain the best recent information in regard to the care of infants.

The booklet as finally presented to the association at the fourth annual meeting held in Washington November 14 to 17, 1913, follows:

## I. Some Important Truths.

1. It is easier, better, and cheaper to prevent than to cure disease.
2. Everything that protects the mother before her baby is born improves the health of the baby after its birth.
3. Many of the diseases observed in older children and adults begin in infancy.
4. Healthy babies make strong men and women.
5. The baby's food, home, and surroundings play an important part in keeping it well or making it sick.
6. Mother's milk is the best food for babies.
7. Cow's milk which has become infected with disease germs kills many babies.
8. Extreme heat and impure air kills many babies in the summer, especially bottle-fed babies.
9. The health and happiness of the whole household are improved by everything done to protect the baby.

## II. General Suggestions for the Care and Feeding of Infants.

### MOTHER'S MILK—NATURE'S FOOD.

1. The most loving act a mother can do is to nurse her baby. When the baby nurses, it not only gets the best food, but it is less liable to many diseases, such as "summer complaint," convulsions, and tuberculosis. Out of every 100 bottle-fed babies an average of 30 die in the first year, while of the breast-fed babies only about 7 out of every 100 die in the first year.

2. Nearly every mother can nurse her baby during the first 3 or 4 months of its life, and if she can nurse it for 10 months, so much the better.

3. There may be an abundant supply of milk after the first few weeks, even if there is but little at first; the act of suckling causes the milk to come into the breasts, and increases the supply. It is very important that the baby nurse regularly.

4. If the baby is too weak to nurse, a healthy infant can be used to excite the flow of milk until the baby has grown strong enough to nurse. This should not be done without a physician's advice.

5. The only way to tell how much food the baby is getting is to weigh it before and after each nursing; for at least 24 hours. The clothes need not be removed, but the baby should be dressed in exactly the same way when weighed after nursing as before. (If the baby should soil its diaper after the first weighing do not change it until after the second weighing.) In case the baby is not getting enough breast milk, the quantity lacking should be made up by properly prepared cow's milk. Let a physician decide this. This may be only a temporary shortage on the mother's part, and with suitable care the milk will probably increase so that the baby will eventually be satisfied with the breast only.

6. The following things influence the milk supply: Peace of mind is necessary for the mother; she must not worry; she should not get overtired. She should eat freely of her customary diet. The total quantity of fluids taken by her in 24 hours should not be less than 2 quarts; in hot weather more. Stuffing, however, is unnecessary and undesirable.

7. Consumption in the mother is practically the only disease that always forbids nursing. Paleness, nervousness, fatigue, pains in the back and chest, or the return of the monthly sickness are not sufficient reasons for weaning, but when these symptoms are present or pregnancy ensues a physician should be consulted at once.

8. Shortly after birth, boiled water, without sugar, may be given to the baby at regular intervals until the mother's milk supply is established. The baby, however, should be put to the breast at stated times, as often as the mother's condition permits.

### Important Points to be Remembered in Nursing the Baby.

It is always wise to make nursing as easy as possible for the mother and to give her opportunities for rest. Therefore, the sooner the baby is satisfied and gaining on three-hour or even four-hour intervals the better.

Convenient hours for nursing the baby are as follows:

(1) Seven nursings in 24 hours: 6 a. m., 9 a. m., 12 noon, 3 p. m., 6 p. m., 9 or 10 p. m., and once during the night.

(2) Six nursings in 24 hours: 6 a. m., 9 a. m., 12 noon, 3 p. m., 6 p. m., and at the mother's bedtime; or at 6 a. m., 10 a. m., 2 p. m., 6 p. m., 10 p. m., and once during the night.

(3) Five nursings in 24 hours: 6 a. m., 10 a. m., 2 p. m., 6 p. m., 10 p. m., or later.

The baby should be offered cooled boiled water between feedings, especially during hot weather.

The length of time for a nursing varies with the individual and the breast. The average infant rarely nurses longer than 15 minutes. The important point is to satisfy the baby. If there is any doubt, let it nurse longer, but not more than 20 minutes. If it is not satisfied after 20 minutes, consult a physician.

It is customary to nurse only one breast at each feeding, and to use them alternately. If, however, the baby does not get enough from one breast, give it both.

It is important to keep the nipples clean; they should be washed before each nursing. Caked breasts or cracked nipples are the usual causes of breast abscesses, and although they may be harmful to the mother, they do not make the milk poisonous for the baby. In both instances consult a physician.

### III. Weaning.

The baby should be completely weaned at the end of the first year. Up to this time breast milk should be given to the baby as long as it thrives. It is better, when possible, to continue nursing through the summer and to wean in the fall. It is better to wean in the summer than in the spring, if by doing so the baby can have breast milk longer.

Do not wean the baby suddenly; it should be done gradually by replacing one breast feeding at a time with a bottle feeding. Several weeks are required for weaning.

It is dangerous to wean a young baby. It should not be done for the convenience of the mother and should never be done without the advice of a physician.

Contagious disease in the mother does not mean that it is necessary to wean the baby. In case of severe illness, contagious or otherwise, a temporary weaning may be necessary for the mother's sake. A

physician should decide this. As soon as the mother's condition permits, the baby should be put back on the breast. The supply of breast milk can sometimes be brought back by putting the baby regularly to the breast for several days, even when nursing has been stopped for several weeks.

### IV. Mixed Feeding.

When the mother's milk is diminishing it is advisable to make up the lack with properly prepared cow's milk. This may be done either by following one or more breast feedings with enough modified milk to satisfy the baby or by giving one or more full bottle feedings in place of a like number of breast feedings.

The flow of breast milk tends to diminish when the baby nurses less than five times in 24 hours. When the baby is being nursed once every 4 hours and is not satisfied, it is better to give him after nursing enough modified milk to satisfy him, rather than to replace a nursing with the bottle. If, on the other hand, shorter intervals and more feedings are being used, a bottle feeding may take the place of a nursing without so much danger of decreasing the milk supply. Most babies need additional food after the seventh month.

### V. Bottle Feeding.

Cow's milk is the most satisfactory substitute for mother's milk. The best milk (this does not mean the richest milk) is none too good. Get "certified" milk if possible. If you can not obtain certified milk, get the cleanest and purest bottled milk you can find. Milk sold in bulk, or bottled from the can in stores, or by milkmen in their wagons, is likely to be stale and contaminated and not a proper food for the baby, even though it looks and tastes good. "Baby foods" and condensed milks and the like are not satisfactory substitutes for good cow's milk and often harm the baby.

Raw milk may carry the germs of tuberculosis, scarlet fever, tonsillitis, diphtheria, typhoid, and other communicable diseases. Unless the milk is above suspicion, danger should be prevented by proper pasteurization of the milk or by boiling or by sterilization.

*Pasteurization.*—Pasteurization means heating the milk to about 150° F. for 30 minutes and then rapidly cooling it. Milk for the baby should always be pasteurized in the feeding bottle. It may be done as follows: The milk should be mixed and poured into the clean feeding bottles, which should then be stopped with clean, non-absorbent cotton. It is then ready for pasteurization. While a number of satisfactory pasteurizers may be bought in the shops, a home-made pasteurizer can be easily constructed.

Take a wire basket that will hold all the nursing bottles for 24 hours and place this basket containing the bottles in a vessel of cold

water filled to a point a little above the level of the milk. Heat the water and allow it to boil for five minutes. Then run cold water into the vessel until the milk is cooled to the temperature of the running water. The milk is then put into the ice chest, which should be not warmer than 50° F.

*Sterilization.*—By sterilization of milk is meant the process of rendering it germ free by boiling it on 3 successive days or by keeping it for 15 minutes under pressure at a temperature of 242° F.

*Boiling.*—Milk is boiled for one or two minutes in a large vessel and poured immediately into the sterilized bottles, stoppered with cotton, rapidly cooled in running water, and put on the ice. This destroys all living bacteria but not spores or eggs, which will not do harm unless the milk is kept too long after boiling. It should be used within 24 hours.

If the baby's milk is to be mixed with other ingredients, such as oatmeal, barley water, rice water, sugar, etc., these should be added to the milk before pasteurization, boiling, or sterilization. When the milk is once prepared the bottle should not be opened until it is given to the baby.

*Preservation of the baby's milk.*—After the baby's milk has been prepared, it is very important that it should be kept cold until it is used.

A simple ice box can be made as follows: Procure a wooden box about 18 inches square and 12 inches deep. Get two tin boxes, one about 11 inches square and 9 inches deep, the other 10 inches square and 9 inches deep. Cracker boxes will do. Cut the bottom out of the larger box. Place 3 inches of sawdust in the wooden box. Put the larger bottomless box upon the layer of sawdust and fill the space between the wooden and the outer tin box with sawdust. Fasten the pieces forming the lid of the wooden box together with cleats nailed on the outer surface. Tack about 50 layers of newspapers cut to the size of the wooden box to the inner surface of the lid. Make hinges for the lid by tacking two strips of leather onto the outside of the box and then tack additional strips of leather to the front edge of the lid to catch on nails driven into that side of the box, in order to hold the lid down tightly. The ice box is now ready for use. Into the smaller tin box put your wire basket containing the filled and stoppered nursing bottles (or a quart and a pint bottle of milk) and surround them with cracked ice. Place the smaller tin box inside the larger and close the lid. Each morning remove the inner box, pour out the water, clean, and repack with ice. Keep the ice box in a cool, shady place.

This ice box, if properly cared for, and kept full of ice, will keep a day's supply of milk cool and sweet.

### Precautions to be Observed in Preparing the Baby's Food.

Everything that comes in contact with the baby's food must be clean. The hands should be washed with hot water, soap, nailbrush, and dried with a clean towel before touching anything that goes into the baby's mouth. The dishes used in preparing the food should be boiled and allowed to dry from their own heat. Do not use a dish towel.

*Bottles.*—As soon as the baby has finished his feeding throw out any remaining milk, rinse the nursing bottle, and fill it with cold water. When ready to prepare the milk for the next 24 hours, empty the bottles, wash them thoroughly with hot soapsuds and a bottle brush, and then rinse and boil them for 15 minutes. The bottles are then ready for filling.

*Nipples.*—Only nipples that can be kept clean easily should be used. They should be turned inside out, scrubbed, cleansed, and boiled. After boiling they should be kept covered in a clean, dry glass. Dirty nipples should not be kept with clean ones. Never use nipples connected with long glass or rubber tubes.

### Directions for the Bottle Feeding of Babies.

Complete instructions for bottle feeding can not be given in a booklet like this. Babies that are artificially fed should be under the supervision of a physician, who should see them at regular intervals. Very young babies, or those that are not thriving, should always be seen once a week, while older healthy babies should be seen at least once a month, whether they are sick or well. The following rules and suggestions apply to all bottle-fed babies:

Before feeding warm the food to blood heat by putting the bottle in a vessel of warm water. Do not test the temperature of the milk by putting the nipple in your own mouth, but sprinkle a few drops on the inner surface of your arm. Be careful not to allow the food to become too hot and see that it does not cool too much while the baby is nursing. This can be prevented by wrapping the bottle in a piece of flannel.

Hold the bottle for the baby throughout the feeding. Do not coax the baby to take more food than it wants, and do not allow it to drink longer than 20 minutes from the bottle. If it takes longer, there is something the matter with the baby or with the nipple.

If there is any food left in the bottle, throw it away; do not give it to the baby later.

Convenient feeding hours are the same as those for the breast-fed babies. (See p. 5.)

*When the baby has diarrhea*, either with or without vomiting, stop all food at once. Give it one or two teaspoonfuls of castor oil,

allow it to have plenty of boiled water to drink, and send for a physician immediately. Save the soiled diapers for the physician to examine. (Always keep them covered.)

If the baby refuses to drink unsweetened, cooled, boiled water, give it barley or oatmeal water.

Be sure to wash the hands thoroughly after changing a diaper and before preparing food. Boil all the soiled diapers for half an hour to kill the dangerous germs which might spread the diarrhea among the other members of the household. Keep the diapers in a solution of strong disinfectant (2 tablespoonfuls of pure carbolic acid in 2 quarts of warm water) in a covered vessel until ready to boil.

### VI. The Home.

The welfare of the baby depends largely upon the condition of its home and surroundings.

*Fresh air.*—A satisfactory home for a baby should provide plenty of fresh air and sunshine. Much of the baby's time should be spent out of doors after it is 3 months old, on a porch or in the yard. A healthy baby should be kept out of doors at least four hours each day, even in winter except when it is colder than 22° F. During the summer a newly born baby may be taken out of doors in the first week. During the winter months the baby should be gradually accustomed to the outside air. A good plan is to begin with an outing of 15 minutes at noon and gradually lengthen the time into the forenoon and afternoon, until the baby is out from 10 a. m. until 2 p. m. The baby must be properly clothed, according to the weather.

The surroundings of the home should be free from uncovered garbage, rubbish, and manure. All of these attract flies and other disease-carrying insects.

### VII. The Baby's Room.

A quiet room if possible with a south or southwesterly exposure should be given to the baby. It should be well ventilated at all times. An open fireplace is desirable. The room should contain no upholstered furniture or heavy curtains. The walls and floors should be so finished as to allow frequent wiping with a damp cloth. A porch adjoining the baby's room and running water near by are desirable. The temperature of the baby's room should be kept not higher than 68° or 70° in winter and in summer should be kept as cool as possible with awnings and shutters. The windows should be kept open day and night in summer, and in winter the room should be aired two or three times a day. The windows and doors should be screened against flies and other disease-carrying insects. In the absence of screens, mosquito netting may be tacked on the outside of the windows. The cellar of the house should be dry.

## VIII. Clothing.

Improper clothing may be harmful to babies in three ways: First by being so tight that it prevents normal movements; second, by keeping the baby too warm; and, third, by not keeping it warm enough. The first fault can be avoided by making all of the baby clothes loose and roomy. Do not put on so many clothes that the baby perspires. All clothing except the shirt band and diaper may be removed in very hot weather. As the weather grows cooler, other clothing is added. The important thing for the mother to remember is that the baby is very sensitive to both heat and cold. She must be constantly on her guard to keep the baby cool enough in summer and warm enough in winter. The principal object of clothing is to insure a uniform body temperature. Loosely woven material should be used to allow proper ventilation for the skin. The use of a flannel bellyband is necessary until the cord drops off. After the first month it may be replaced by a knitted band with shoulder straps.

### List of Clothes for Newly Born Baby.

Three flannel binders (½ yard of 27-inch flannel).
Three shirts, wool and silk, or wool and cotton.
Two flannel petticoats.
Two flannel or knitted sacques.
Two pairs of worsted socks.
Two dozen diapers, 22 by 44 inches.
One dozen diapers, 25 by 50 inches.
Four white muslin slips.
One cloak.
One warm cap.
One pair of mittens.
One veil.
Two blankets.
One box talcum powder.
Two dozen safety pins, large and small.
Two bath towels.
Two soft towels.

LATER.

Three pairs of woolen stockings.
Three knitted bands with shoulder straps.
Additional diapers.

## IX. Sleep.

Every baby needs 20 hours of sleep a day in its first month and not less than 16 up to the twelfth month of its first year. It should sleep alone, not in a cradle, but in a crib. If no crib is available, a clothes basket or a box of sufficient size is a good substitute. An expensive mattress is not necessary. A simple mattress made of excelsior and covered with a heavy blanket will answer very well. A sufficient quantity of clean bed clothing should be provided.

The room should be darkened and well ventilated; the windows should always be open at the top at least 6 inches, except in the coldest weather. If the baby cries when it should be asleep, it is probably sick, overfed, or hungry.

All children should take a nap of from one to two hours in the middle of the day until they are 6 years old.

### X. The Bath.

Every baby should be bathed at least once a day; during the hot weather two or three sponge baths may be given in 24 hours. The temperature of the bath should be from 90° to 95° F. in the early months. By the end of the first year the temperature may be lowered to 80° to 85° F. If you have no thermometer, a practical test for the correct temperature is to use water that feels warm to the elbow.

When bathing the baby in a tub let it rest upon your left arm, which is slipped under its back from the baby's right side. By grasping the baby under the armpit with the left hand a good hold is secured which prevents slipping. The right hand is left free for washing the baby. A special wash cloth, preferably of cheese cloth, should be provided for washing the baby's face and head.

After the baby is taken out of the tub it should be dried in a large soft bath towel.

Do not wash a healthy baby's mouth; it will do no good and may do harm. As soon as the baby has teeth, clean them carefully with a soft clean cloth or gauze, and later with a soft toothbrush and cooled, boiled water.

After the baby is dressed it is wise to keep it indoors for at least an hour after bathing and to protect it from drafts.

The best time for bathing the baby is just before its morning feeding, between 8 and 10 o'clock. After its bath the baby will be ready to take its food and go to sleep.

### XI. Weighing the Baby.

The baby should be weighed regularly at least once a week for the first year and the record of the weight kept in a book. The most convenient time for weighing the baby is before the regular bath in the morning. It is well to remember that the record of the baby's gain in weight will be reliable only if it has been weighed at the same hour each time.

### XII. The Normal Baby.

An average healthy baby weighs from 7 to 7½ pounds at birth; 15 pounds at 5 or 6 months, and 21 pounds at 12 months. In other words, the baby doubles its weight in 6 months and trebles it in 12 months.

It is 20 to 21 inches long at birth, 25 to 26 inches at 6 months, and 28 or 29 inches at 12 months.

More rapid gains are noted in the first 6 months than in the second 6 months. The average weekly gain is about 4 ounces.

It sleeps soundly.

Is happy, active, and enjoys using its arms and legs freely.

Begins to follow moving objects with its eyes at the second or third month.

Begins to sit unsupported at the seventh or eighth month.

Cuts its first tooth from the sixth to ninth month; has about 6 teeth at 12 months, 12 teeth at 18 months, 16 teeth at 24 months, and 20 teeth at 30 months.

Walks from the fourteenth to the seventeenth month.

The soft spot or opening in the skull closes between the eighteenth and twenty-fourth month.

Begins to say words like "papa" and "mamma" after the twelfth month, and simple, short sentences at the close of the second year. Children, however, that are otherwise perfectly normal may not begin to speak until a year later than the time stated above, or may present variations from any of the above.

### XIII. Contagious Diseases.

The spread of most contagious diseases is caused through ignorance or carelessness. Inasmuch as contagious diseases often can not be distinguished from the noncontagious, it is wise to separate children from every sick person, young or old, until the true nature of the illness is known. If the disease is contagious, the separation must be kept up. This separation consists in placing the patient in a room by himself and giving him separate wash cloths, towels, and dishes. One person only should care for the patient, and the clothing of this person should be protected by a gown or long apron or sheet when in the patient's room. After caring for or handling the patient, the caretaker's hands should be carefully washed with warm water and soap.

Every person should cooperate to the fullest extent with the local department of health in its efforts to limit the spread of communicable diseases. Do yourself what you would desire of another parent whose child might be a source of danger to your own family.

So-called colds, such as running nose, sore throat, bronchitis, and the like are easily communicated to children and may be especially serious for the baby.

Do not sneeze or cough in the baby's face. A mother should protect the baby from catching her own cold by tying a handkerchief or piece of cheesecloth over her nose and mouth when nursing or caring for her baby. She should not kiss the baby.

Tuberculosis very often gets its start in infancy. Every effort, therefore, should be made to protect the baby from infection. Common ways of infecting the baby are by kissing it, coughing or sneezing near the child, or by allowing it to sit on the floor where it has a good chance to pick up tuberculosis germs with the dust on its toys or other objects and thus get them into its mouth. It is a good plan to have a separate room or at least part of a room fenced off as the baby's play room, and to cover the floor with a clean sheet each day. Milk from tuberculous cows may also be the cause of tuberculosis in the baby.

### XIV. Eye Disease and Blindness.

Many babies within two or three days after birth, occasionally later, have what is commonly known as "sore eyes" or, as the mothers say, "have caught cold in their eyes." The proper name for this condition is ophthalmia, and it is caused by a germ getting into the eyes during the baby's birth. The eyelids become reddened and swollen and in a very few hours pus is seen in abundance. All such cases must be energetically and skillfully treated at once by trained physicians. Neglect and carelessness may result in the loss of the baby's sight. The condition can usually be prevented if the physician puts a drop of a proper antiseptic in each eye immediately after the birth.

### XV. Vaccination.

Do not forget that the earlier the child is vaccinated, the sooner it is protected against smallpox. In this country it is not possible to know when and where an outbreak of smallpox will take place. It is well, therefore, to be prepared.

The best time to have a baby vaccinated is in its first year. If the baby is healthy it may be vaccinated as early as the third or fourth month.

### XVI. Birth Registration.

See that your doctor registers your baby's birth as soon as possible after it is born. Birth registration secures citizenship and may save future legal trouble.

### XVII. Pre-Natal Care.

By this is meant the care and advice given to the mother before the birth of the baby, in order that she may fit herself to bear and to care for it.

There is no doubt that the welfare of the baby depends largely upon the mother's health and that many mothers would be better able to nurse their babies if they had proper care, food, clothing, and exercise before the babies were born.

In order to secure the proper advice as early as possible, every prospective mother should consult a physician as soon as she knows

she is to have a baby. If she can not afford the services of a physician, she should apply to a maternity hospital or dispensary where competent physicians and nurses are ready to advise and care for her until the baby is born.

If, for any reason, the prospective mother can not see a competent physician at least once a month during her pregnancy she should send a specimen of her urine to him regularly each month. She must drink enough liquid so that she will pass at least 3 pints of urine each 24 hours. Her bowels should move once a day. Persistent or sudden and severe headaches, swelling of the face or hands, increasing swelling of the ankles must be reported at once to the physician in charge. Any appearance of blood from the vagina demands instant summoning of the physician. As soon as a woman knows she is pregnant she should go to the dentist and have her teeth put in good condition.

The above statements are the merest outlines of the fundamental care which every woman should have. It must be remembered that if the prospective mothers are intelligently supervised and will report all untoward symptoms at once deaths and disabilities of both mothers and children will be less frequent.

ADDITIONAL COPIES

OF THIS PUBLICATION MAY BE PROCURED FROM
THE SUPERINTENDENT OF DOCUMENTS
GOVERNMENT PRINTING OFFICE
WASHINGTON, D. C.

AT

5 CENTS PER COPY

V